

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-004676**Date Inspected:** 20-Nov-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1430**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Wang Sei Fa / Sun Wei**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Sub Assembly**Summary of Items Observed:**

On this date CALTRANS OSM Quality Assurance (QA) Inspector was present during the times noted above for observations relative to the work being performed.

**Bay 1 - OBG Sub Assembly**

This QA Inspector observed ZPMC welding personnel performing automated, in gantry, Gas Metal Arc Welding (GMAW) of closed rib Partial Joint Penetration (PJP) welds to deck plate designated as DP176-001 on Gantry #1. In process GMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure.

This QA Inspector observed ZPMC welding personnel performing automated, in gantry, Gas Metal Arc Welding (GMAW) of closed rib Partial Joint Penetration (PJP) welds to deck plates designated as DP342-002 and DP257-002 on Gantry #2. In process GMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure.

**Bay 3 - OBG Sub Assembly**

This QA Inspector observed ZPMC welding personnel performing automated in gantry Flux Core Arc Welding (FCAW) of stiffener to bottom plate welds designated as BP148-001-001, BP040-001, BP121-001, and BP175-001. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure.

This QA Inspector observed continued Shielded Metal Arc Welding (SMAW) tack welding and fit-up of edge panel components designated as: EP091-001 and EP071-001.

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## WELDING INSPECTION REPORT

( Continued Page 2 of 3 )

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This QA Inspector observed ZPMC welding personnel performing Flux Core Arc Welding (FCAW) of Complete Joint Penetration (CJP) at WT stiffeners for OBG bottom panels. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure. Component numbers are designated as: BP127-001-004/003 and BP073-001-006/005.

### Bay 4 – OBG Sub Assembly

This QA Inspector observed ZPMC welding personnel performing Flux Core Arc Welding (FCAW) of tower diaphragm gusset component weld designated as WSD1-59m. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure.

This QA Inspector observed ZPMC welding personnel performing Flux Core Arc Welding (FCAW) of tower diaphragm gusset component weld designated as WSD1-71m. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure.

### Bay 7-OBG Sub Assembly

This QA Inspector observed ZPMC welding personnel performing Flux Core Arc Welding (FCAW) of CJP on OBG floor beam assembly designated as FB039-002-148. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure.

This QA Inspector observed ZPMC welding personnel performing Flux Core Arc Welding (FCAW) of CJP on OBG floor beam assembly designated as FB024-004-146. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure.

This QA Inspector observed ZPMC welding personnel performing Flux Core Arc Welding (FCAW) of CJP on OBG floor beam assembly designated as FB023-003-146. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure.

This QA Inspector observed ZPMC welding personnel performing Flux Core Arc Welding (FCAW) fillet welding of OBG floor beam assembly designated as FB024-004-075. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure.

### Ultrasonic Testing

The QA Inspector also performed Ultrasonic Testing (UT) on approximately 50% of CJP floor beam welds previously accepted by ZPMC ultrasonic technicians in accordance with AWS D1.5-2002, section 6, table 6.3. The QA Inspector observed no rejectable indications at the time of testing. The QA Inspector generated a TL-6027 UT report on this date. The completed work observed at this location appeared to be in compliance with the contract specifications. Accepted weld identification numbers were FB001-109-104, FB003-116-105, FB003-115-104, and FB062-002-095.

### Tracking and Log Book

This QA Inspector reviewed the contract files and tracking logs for the Magnetic Particle Testing (MT), Ultrasonic Testing (UT), Welding Procedure Specifications (WPS), Procedure Qualification Records (PQR), and QC Inspector records for the deck panel repairs to date.

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## WELDING INSPECTION REPORT

( Continued Page 3 of 3 )

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### Summary of Conversations:

No relevant conversations.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Peter Dautermann, (858) 232-6799, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Clifford,William
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Quality Assurance Inspector
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<b>Reviewed By:</b>	Cuellar,Robert
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QA Reviewer
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